Oracle - Parallel Processing in Oracle Database 12c Ed 1

Code: D87438GC10
Length: 1 days
URL: View Online

Suggested Audience

Skills Gained
- Use Database Resource Manager to complement the control of parallel processing usage
- Define why and when to use parallel processing
- List the SQL statements and data loading utilities that can benefit from parallel processing
- Explain the basic concepts and theory associated with parallel execution
- Use a variety of parallel execution features with different SQL statements
- Read and evaluate execution plans for parallelized statements
- Use parallel processing features including Auto DOP, statement-queuing, and in-memory parallel execution
- Examine specific configurations such as RAC database to and Database Machine with parallel execution
- Troubleshoot parallel processing issues such as no parallel execution, unexpected DOP, or performance decrease
- Trace parallel execution to provide information to Oracle customer support

Who Can Benefit
- Application Developers
- Data Warehouse Administrator
- Database Administrators
- Developer

Prerequisites
- Knowledge of database administration

Course Details

Parallel execution concepts
- Benefits of parallel processing
- When to use parallel processing?
- Query Coordinator and parallel execution (PX) servers
- Parallel execution communication
- The producer / consumer model
Using Manual DOP
- Statements that can be parallelized
- SELECT with single parallel table scan and the explain plan
- SELECT with parallel hash join and the explain plan
- Parallelized SELECT with partition wise join and the advantages
- Parallelized DML operations

Using Auto DOP
- Auto DOP versus manual DOP
- Auto DOP parameters
- Auto DOP behavior
- Impact of Auto DOP on other parameters
- SELECT explain plan with Auto DOP
- Auto DOP in RAC environment

Using Statement Queuing
- Comparing statement queuing to minimal DOP guarantee
- Setting parameters
- When to choose statement queuing
- Using Database Resource Manager with statement queuing
- Viewing queued statements

In-Memory Parallel Execution
- The goal of In-Memory Parallel Execution
- How SELECT works with and without in-memory parallel execution
- Set parameters to use In-Memory parallel execution
- In-memory PX examples

Parallel Execution and Data Loading
- DataPump export / import
- SQL*Loader
- External tables: applying parallel execution as best practice

Troubleshoot situations when parallel processing does not proceed as desired
- When parallel processing does not proceed as desired
- When no parallel processing occurs
- When Auto DOP computes unexpected DOP
- When Statement Queuing starts unexpectedly
- When performance decreases due to parallel execution
- Tracing parallel execution
Managing a Mixed Workload with DBRM

- Take advantage of DBRM to manage concurrent parallel executions with mixed workloads
- Use plan directives to manage concurrent parallel executions
- How to reject queries
- Using dynamic switching
- Understanding how directives interact